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McGinn, Thomas.

Final report... of the common
gaol at Montreal, 21st Sept. 1854.

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FINAL REPORT

TO THE

HON. COMMISSIONERS OF PUBLIC WORKS.

On the completion of Improvements in the north-east Wing of the
Common Gaol at Montreal, forwarded to the Secretary
of that Department, on 21st Sept. 1854,

CONTAINING

A Statement of their nature and extent, and showing the urgent
necessity for improving the other Wings of the Gaol
upon the same principle ;

WITH

AN APPENDIX,

Demonstrating their complete success, by trial, with special reference
to the peculiar method of Heating and Ventilation employed,
as contrasted with other methods in use which
are detrimental to Life and Property.

BY THOMAS M^CGINN,

KEEPER OF THE COMMON GAOL.

MONTREAL:

PRINTED BY SALTER AND ROSS, GREAT ST. JAMES STREET.

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In submitting the following Report and Appendix to the Government and people of Canada, the writer disclaims any other motive than an earnest desire to see a branch of the public service in which he has spent so important a part of his life, and to which he has devoted much attention, placed upon the most perfect and efficient basis. The sincerity of this statement, he feels, may be tested by the numerous Reports, Plans and Estimates which he has prepared and submitted to Government during the last sixteen years, all bearing upon the state of the Montreal Gaol, and the necessity for improvements in it. He feels grateful to the Government and the public for their expressed confidence in him, and for their uniform approbation of his services. His constant aim will ever be to merit such ; and he conceives that he cannot better testify his gratitude, after faithfully discharging the duties of his office, than by continuing to urge the necessity that still exists for improvements in our prisons—for the amelioration of laws at present in force respecting vagrants—for the enactment of laws concerning juveniles—by submitting the ideas he may receive from experience and observation—and aid if possible in carrying out the ameliorations so often and so earnestly recommended by him. He therefore takes the liberty of addressing a copy of his pamphlet to the various members of the Government and Legislature, and to such members of society whose position and influence are calculated to forward a work in which both the interests and the duty of the whole community are immediately concerned.







## REPORT.

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I feel very thankful that I am at length in a position to make a final Report upon the works carried on and completed under my superintendence, in the north wing of the Montreal Gaol, by the direction and authority of the Honorable Commissioners of Works. The improved wing was ready for the reception of prisoners when the late epidemic—cholera—made its appearance, and was occupied by the convicts on the first day of July. By this well-timed change, the other wards of the gaol were relieved from over-crowding, and an opportunity was afforded of testing the value of the improvement in a hygienic point of view. I am very thankful to say, that it has not disappointed our highest expectations in this respect. But it is during the winter months, when every window and opening must be tightly closed, that the peculiar method of heating and ventilation adopted here can be fully appreciated; and it is then also, that, contrasted with this wing, the evils so long complained of in the others, will be seen and felt in their true light. To those evils I will advert in the proper place; but I would here remark, that the experiment so successfully tried in the present case, suggests the principle, which, if carried out in the unimproved wings, will render the Montreal Gaol equal to the wants of the District for many years to come. In respect to its adaptation to the important objects aimed at by such institutions, it would be inferior to few of the prisons which skill and experience have combined to erect upon principles entirely new. The improvement of the remaining wings could be effected at a cost proportionably less than that incurred

by the one now completed, inasmuch as a greater portion of the work would be accomplished by prison labour. The value and importance of employing this labour will be understood from the fact that, in the construction of the works now completed, the convicts performed a large proportion, such as clearing out the foundations, taking down the old brick-work, making mortar, attending upon masons and brick layers, &c. All the iron doors, except the fastenings, the window gratings, a considerable portion of the coarser kinds of carpenters' work, sawing, &c. and the entire painting and glazing, were the results of prison labour.

It would convey a very erroneous idea of the work in question, were I to speak of it merely as an improvement of one of the wings of this unskilfully constructed prison. It is an improvement containing in its design principles entirely new in this Province, and I may add in America, in so far as public buildings are concerned, if I except a prison in Boston which I believe is in course of erection, modified in form, but containing five tiers of cells. For introducing those principles in the present undertaking, I have been very severely censured by theorists, both in reports to Her Majesty's Provincial Government and in the columns of the public press; and it is worthy of remark that my friends who so freely commented upon this feature of the work, never saw the design, nor knew aught of the peculiar principles of construction whereby perfect ventilation may be as certainly secured to every cell in a building of twenty tiers, as in a building of one or two tiers.

Besides being very insecure, the evils chiefly complained of in the construction of the wards of the Montreal Gaol which the present improvement was designed to remedy, consisted in the following :—The cells were made to abut against the outside walls, which being entirely of stone, were, during a great portion of the year, considerably affected by damp, caused by

what is commonly called *sweating* of the stones. The mode of heating, or rather I should say, the absence of any mode of supplying heat, was another constant source of complaint. The stove which gave an unequal and very inadequate heat to the wards was placed in a central corridor, which divided the ward equally, having a range of cells on each side; such means of heating could never be felt in the cells, where in very cold weather the damp was speedily converted into ice upon the walls. The prisoners, who pressed round and even quarrelled to get near the stove during the day, were shut up between very cold or damp walls at night. Bad ventilation was another complaint—the provision for which was, if possible, still more defective and pernicious, consisting of a small window of not more than ten inches square, placed eight feet from the floor, and one large window at the end of the centre corridor opposite to the ward door. These openings for the admission of pure air, and the escape of foul—and they are the only ones—are closed during the five coldest months of the year, with the exception of the ward door, which is frequently opened during the day time. It is therefore no exaggeration to say, that any thing deserving the name of heat or ventilation was—and in the unimproved wards of the Montreal Gaol, still is—wholly unknown.

The physical evils to which prisoners incarcerated in this way are compelled to submit, do nevertheless fall far short in their magnitude and consequences when compared with the moral pestilence in which this badly constructed prison, and ill digested laws, places the tyro in crime who is so unfortunate as to be confined there—or, as it not unfrequently happens, a perfectly innocent youth—who has fallen under unjust and even groundless suspicion. The cells, according to the old system of construction, which still remain in the two wings of the gaol where untried prisoners are confined, open into one common corridor, which is

central, so that even when locked up for the night, the prisoners can see and converse with each other, thus exposing every individual confined in the ward to the immoral conversation which day and night takes place among the regular inmates of the cells. It is impossible to effect anything like classification under such circumstances. The most unnatural crimes which are known to be committed where more than one prisoner is confined in the same cell, fearfully swell the list of evils arising from bad laws, and worse means of carrying them into effect, which, notwithstanding many earnest remonstrances on my part during ten or eleven years, have been allowed to remain—a curse to the community—until the present improvement was undertaken. But it must be kept in mind, that this is a commencement which will prove of very little value unless it be followed up by similar alterations in the other wards.

To remedy evils of such magnitude, and to provide a perfect system of heating and ventilation for the ward, separate sleeping cells for each prisoner, and an adequate means for classification, it was found that the ward must be entirely gutted, a new system of cells constructed—back to back—running a corridor entirely round, between the cells and the outer wall. But the old wards were found, upon examination, to be much too narrow to admit of the requisite alteration; and it was therefore resolved to take down the rear wall of the wing, and re-build it further back, so as to afford sufficient room, which was accordingly done.

At this stage of the work, the duty assigned to me by the Honorable Commissioners of Works consisted in merely superintending the same, and procuring materials for it; and, as far as might be done by prison labor, to prepare materials for all the other parts of the work except the taking down and re-building of this wall, which was placed under contract to Messrs. Ostell & Perrault, who were employed at first as archi-



fects of the work. I must here observe that a very important error was committed by those gentlemen in not removing this wall back more than seven feet, when obviously it should have been removed to at least double that distance; and certainly the very trifling amount saved by such mistaken economy is poor compensation for the narrowness of our corridors, and the very contracted appearance of the whole work. Another error was committed in constructing this wall during the severe cold of winter, when the work could not be well executed; and no time whatever was gained by it. In presence of the Sheriff, I remonstrated against this proceeding with Mr. Ostell, and with the Hon. Joseph Bourret, (the then Chief Commissioner of Works) but no attention was given to me, and the work proceeded. The consequence is, that a very considerable settlement has taken place in the wall.

Having received instructions from the Department of Works to that effect, I lost no time in providing materials for the other portions of the work, viz:—bricks, sand, lime, oak timber, iron, &c., all of which I procured in the city, with the exception of the oak timber—the only lot in Montreal being of an inferior quality, and held by Mr. Ostell at 2s. per foot. I succeeded, however, in a few days, in securing a very superior lot from Kingston, from Messrs. Calvin & Cook, at 1s. 2d. per foot, the sizes of which being admirably adapted for the purposes required.

Iron being procured for making the cell, ward and passage doors, (171 in number) and the large window gratings, (32 in number) I selected a few convicts whose period of imprisonment had longest to run, and set them to this branch of the work. I succeeded in this beyond all my expectations. A very important item in the expenditure was thus saved, and a quantity of work performed that will bear comparison with any thing of the kind from the best workshops in the city. I allowed the convicts engaged in this and other labo-

rious parts of the work, a few pounds of soup-beet daily—the only extra expense incurred on their account.

When the outside wall was finished, I immediately commenced to take down the old cells; but my proceedings were here arrested by an order from the Attorney-General, based upon a letter of remonstrance addressed to him by one of the Inspectors of the Provincial Penitentiary, strongly objecting to certain arrangements which it was supposed were to be carried out to the prejudice of the new improvement. The principles and bearing of the objections having been carefully examined and inquired into, I received instructions from the Department of Works to proceed as before; but another difficulty arose, which had the effect of checking the progress of the work for two or three weeks longer.

Knowing well that any system of heating and ventilation, to be successful must be understood and carried out from the beginning as the work progressed, I applied to the architects for the plans, setting forth the manner by which this most important part of the work was to be executed. I was surprised to find that no consideration had been given to this essential feature of the improvement, and that the intention was to heat and ventilate in the old way. I found by several experiments which I made that this method would prove a failure, so I addressed the Honorable Board on the subject, suggesting the adoption of the principle upon which alone an equal distribution of heat and pure air could be secured to every cell in the wing. Plans based upon this principle, but much improved in their details, were soon after sent to me from the office of the Board, with instructions that I should henceforth assume the entire control of the works under the immediate directions of the Honorable Commissioners, without the intervention of an architect.

Thus unfettered, I applied myself with all my might

to prove that the confidence so reposed in me was not misplaced. The foundations of the cells were laid, making full provision for the heating apparatus, and for an abundant supply of pure air, without weakening any point that could affect the security of the prison ; but I found the space in which the work must be carried out too cramped, the clear space within the walls being 86 feet 6 inches by 31 feet 8 inches and 45 feet in height. Of this space, 76 feet 8 inches by 22 feet is taken up by the inner building containing the cells, leaving but four feet ten inches in width for the corridors—a space altogether too limited to give any thing like proportion to a passage 86 feet long and 45 feet high. I regard this as the chief, if not the only defect in the whole work.

The new cells are placed back to back, opening into the corridors on each side, and are divided into five ranges or tiers in height, having a narrow gallery, sufficient only for one person, running entirely round. The cells, 8 feet 4 inches long, 3 feet 2 inches wide, and 7 feet 10 inches high to the crown of the arch, are strongly secured by iron doors, composed of bars three eighths of an inch thick and one inch and three quarters wide ; the bars are two inches apart and strongly riveted at the crossings. The door fastenings and locks are on the front face of the strong oak frame-work upon which the doors are hung, and are consequently beyond the reach of the prisoners. The doors open into the cells, the number of which upon each range is thirty-three—seventeen opening upon the front gallery, and sixteen upon the rear. Each side or gallery has its own wash-rooms and water-closets, the latter opening on to the end gallery. The whole is supplied with water from a large cistern placed in the attic, into which the water is conducted from the city works.

It will be seen from the above that the improved wing contains one hundred and sixty-five cells, ten wash-rooms, and ten water-closets, besides two bath-



rooms furnished with apparatus for cold, hot, shower, and vapour baths, exclusive of the large and valuable attic.

The heating and ventilation is provided for in the following manner :—Four large air ducts of 3 feet by 1 foot 4 inches each, are taken from the outside of the building and carried below the foundation, where the openings are strongly secured by bars of iron ; thence they are conveyed into the centre of the building, where they discharge into a canal two feet square, running along the centre of the whole range of cells ; directly between the lower tiers, over the air canal, an open jointed floor is laid, the apertures in which correspond with the aggregate dimensions of the four air ducts ; above this floor is an air chamber eight feet high and two feet wide, corresponding with the height of the first tier of cells ; the side walls of this chamber form the rear walls of the cells on each side. In this chamber the steam pipes are placed, by which the air thus continually flowing into it, is heated to the required degree. The crown of the arch over the air chamber is pierced by 160 flues or ducts of four inches square. These are carried up separately in the centre or dividing wall which stands upon the crown of the above-mentioned arch, and form the back wall of the several tiers of cells. One of these ducts runs into each cell, at the height of seven feet above the floor, and is furnished with a register to regulate the quantity of heat flowing in through it. Thus each cell receives its own supply of pure warm air.

To heat the air supplied from without as above described, a steam boiler 14 feet by 3 feet 9 inches has been provided ; and to avoid the consequences of an explosion, this boiler is placed outside the main wall of the building, the steam being conveyed to the pipes in the chamber already described by a large connecting pipe two inches in diameter. All the pipes used for this purpose are wrought iron. The smoke

from the furnace is carried round by the basement of the south end of the rear new wall to the centre of the north end, where an upright shaft has been erected. This arrangement not only cuts off any damp that might enter from the rear, but it adds to the heat of the building; and notwithstanding the length of the horizontal shaft, compared with the upright one, the draught is perfect.

With a very moderate head of steam—say seven or eight inches, it returns uncondensed to its chamber in the boiler-room after passing through the whole length of the pipes, thereby proving the capacity of the generating power to heat double the quantity of pipe. When the whole is in operation, a strong current of fresh air constantly flows into the hot air chamber, where, coming in contact with the heated pipes, its temperature is rapidly increased, and it is forced into the small ascending ducts by the greater density of the cold supply pressing in below; and this current of fresh air is entirely independent of the strength or direction of the air currents without. Even barometrical changes will but slightly affect it. The quantity forced up will be the exact result of the specific gravity of the external air, compared with the temperature of the air chamber. Hence an increased temperature in the air chamber increases the velocity of the air currents in all the ducts; and as it is impossible that the quality of the air can be deteriorated by any thing with which it comes in contact, an abundant supply of pure air must be obtained, even when the weather is coldest.

A moment's reflection will suffice to convince any mind capable of forming an opinion upon such a subject, that the apparatus I have now described cannot fail to act—the principle upon which its success depends being one of the physical laws. Having shown that this apparatus cannot fail to furnish a *constant flow of pure warm air into every cell*, it remains to be shown how that air can be ejected after it has become vitiated

by inhalation and rendered unfit for further use. To effect this no less necessary operation, another system of four inch ducts connecting every cell with the ejectors, has been carried up, beginning at the foundation. These ducts are in the side wall of each cell, having two registers in each, one for winter and the other for summer use. The register for winter use is ten inches from the floor, and six feet higher than that for summer use. The ducts are carried up separately the whole height, increasing in number as the work progresses ; and are in this respect the reverse of the heating ducts, which diminish in number as the work rises. Above the system of cells, these small ducts are collected into larger ones, and conveyed by flues formed between the windows of the attic room to the roof, discharging into the large air chest, in which the patent ejectors are inserted. In the summer season, both registers are kept open ; and when a brisk wind prevails outside, or when the temperature at the elevation of the ejectors is lower than it is in the cells, I have found a strong current of air flowing into the registers. When this is not the case, the open windows all round, and the latticed doors, secure to every prisoner the greatest possible amount of ventilation. In the winter season, the lower register only in each cell is kept open, so that the warm air flowing through the register in the rear wall can only escape by descending to the floor, thus equalizing the temperature of the whole room or cell, and causing a constant current of air through every part of it, which would be abundantly sufficient for two persons, independent of the quantity admitted through the doors, inasmuch as a current of air passing through the registers at the moderate rate of two miles per hour would give 9<sup>7</sup>/<sub>8</sub>ths cubic feet of fresh air to each person every minute. In short, the ventilation of each cell would be perfect while the heating apparatus was in operation, even though the cell doors should be hermetically sealed:



I feel that I may safely conclude this part of my report by remarking that the objects aimed at by this improvement, viz : security—separate confinement—classification—sufficient and equal distribution of heat—perfect ventilation—means of control—surveillance and discipline—have all been attained in a very high degree. It only remains for Government to make such laws and regulations for the management of the convicts who now occupy this part of the gaol, as shall secure the full enjoyment of those advantages, and give that effect to the sentence of a Criminal Court which it is intended to have, but which, up to this moment, owing to ill-digested systems, imperfect or vicious laws, and badly constructed prisons, mock every attempt at reform. So far from such sentence having a salutary effect, either in restraining crime or reforming the morals of prisoners, the very reverse has been the result. Our prisons and houses of correction have been little else than houses of corruption and nurseries of crime.

The extension of the rear wall already noticed required a corresponding change in the construction of the roof. In making this change, and with a very small proportionate increase of expenditure, I designed a large room in the attic, which, together with the use for which I designed it, were condemned by persons who seemed to consider it a special duty to find fault with the whole improvement, *from the time I was appointed to take the entire control*; but as it received the approval of the Honorable Commissioners, it *was* constructed, and forms a most valuable appendage to the prison, either as an hospital or a work room. Its value was fully acknowledged by the gaol Physician during the late epidemic. This room is 80 feet long, 20 feet wide and 10 feet 6 inches high. It receives light from thirty-two windows, between each of which a ventilating flue is carried up. Its heat and ventilation is regulated by the same arrangement as that

adopted in the cells, and is supplied from the same source. Wash-rooms and closets are also attached to it. As an hospital, this room would accommodate from twenty to thirty patients in a manner not surpassed by any institution in this country. For a work room, the accommodation would depend upon the kind of employment carried on in it; but for either purpose, it is valuable.

The contrast which this improved wing opposes to the other wings of the gaol is so great, and the defects which it serves to expose in the latter are so many and of so serious a character, that it will be scarcely possible to allow them to remain as a place of confinement for persons who, in the eye of the law are innocent, i. e. untried prisoners. Indeed if these wards into which prisoners are supposed to enter, many of them spending from one to six months therein previous to their trial, are allowed to remain in their present insecure and unwholesome condition, without proper means of heating or ventilating them, and without any means whatever of classification, then all that has been done, valuable as it may appear, must be regarded as little better than a useless waste of the public funds. The gaol will still remain a hot-bed of crime, and a nursery of vice, a place where the comparatively innocent and inexperienced will be sure to complete an education that will qualify them for a life of sin and guilt, and where the old and hardened offender is neither adequately punished nor prevented from inflicting the most grievous injury upon society by corrupting the youth who cannot be separated from him. It must be borne in mind, that the improved ward is intended for male convicts—persons whose guilt has been established beyond a doubt. Is it not unjust—nay cruel—to allow wards occupied by untried prisoners who in the eye of the law are innocent (many of whom are afterwards proved to be so) to remain in the miserable state described?

Economy joins with justice in demanding that the wards for untried pisoners should be so improved, that neither the health nor morals of the accused would suffer while awaiting trial, whether innocent or guilty. The humiliation and regret felt by every person who is not hardened in crime on being brought into gaol should not be obliterated by being placed among old offenders who make a jest of crime. Even if such an one should be convicted and transferred to a ward where classification and discipline are carried out, improvidence alone would expose him or her to a previous apprenticeship of corruption.

It must not be forgotten that many persons of both sexes and of all ages, who are incarcerated in the untried wards for months preceding their trial, never come under the discipline of convicts, but establish their innocence and return again to society. Many of these belong to the better class, and however innocent or respectable, they are not only degraded by the associations of an ill constructed prison and its demoralizing influence while forced to remain within its walls but they are therein obliged to form acquaintances of the lowest and most dangerous character, who will pursue and intrude upon them after their release. The magnitude of this evil and the consequences that have flowed from it in this District would fill a large volume, and the facts that could be stated would scarcely be believed if published.

But if all the prisoners committed for trial were sure to pass from the untried wards into the improved wing, and there feel the benefit of wholesome discipline in a well constructed and healthy establishment, still it would be no less unwise than unjust to expose prisoners to the effects of a building which must impair if not destroy their physical energies, and as certainly tend to destroy every moral principle. The hope of reforming the criminal diminishes in proportion as his vicious habits meet with the sympathy and encour-



agement of kindred spirits. Under such influence, he sinks lower in the moral scale ; and it follows as a logical necessity, which experience abundantly confirms, that the earlier the remedy can be applied, the more certain will be the hope of success. Let not, then, the first weeks or months of imprisonment during which the accused party is held to await trial, have the certain effect of increasing the difficulty of reforming the offender ; or what is still worse, let not that unfortunate one who, unable to procure bail, is obliged to remain incarcerated until proved innocent, be compelled to occupy for weeks or months an ill-ventilated, unhealthy prison, among hardened criminals, where almost certain contamination and injury must ensue.

I am persuaded, after full and mature consideration, founded upon long experience and facts which are of a nature to forbid publication, that the improvements now perfected in the north wing of the gaol, excellent as I conceive them to be, will prove of little value, if the wards for untried prisoners are allowed to remain as they are at present.

As the experiment now made completely establishes the practicability of improving the whole of the gaol for a much less sum than a new building of similar character would cost, I venture to suggest that the present improvement should be taken, not as an exact model, but as demonstrating the principle upon which a similar work could be perfected in the two remaining wings of the gaol. Then, but not till then, will the Montreal gaol become what every appendage to our criminal code should emphatically be :—" a terror to evil doers, and a praise to them that do well."

I would further suggest, that the improvements in the two wings referred to should not be an exact copy of the wing already improved, but should be adapted to the confinement of untried prisoners—the improved



wing being intended for the punishment and reformation of persons convicted of crime.

The south end wing should be fitted up with means for carrying out a well digested system of classification and discipline, combining thorough ventilation with perfect security, and external uniformity in construction. To effect this, the wards should be considerably enlarged, especially in width. This would of course be done by removing the rear walls to the required extent, which for the purposes to be attained, need not be more than seven feet. The wing designed for untried male prisoners should then be divided into cells in the same manner as the improved wing, but much larger. I would have them seven feet by seven feet six inches, and of the same height as the improved cells. The corridors should not be open to the top throughout, as in the convict ward, but arched over so as to form a series of floors corresponding with the height of the cells. Sixteen cells of the above dimensions, furnished with two wash-rooms and two closets, could be formed on each floor, and these should be divided by a cross wall in the centre of the end corridor, thus affording accommodation to two distinct classes of prisoners on each floor; or, ten distinct classes in the whole. Eighty prisoners could be thus confined separately in single cells, and find ample room for exercise in the long corridor during the day. The heating and ventilation of this ward would be by means of flues carried up in the centre wall and in the side walls of the cells, in the same manner as those in the improved wing; and the roof should correspond with that of the improved wing, having a large room in the attic adapted for an hospital or work-room.

The rear wing next claims our attention as a place of confinement for females, either tried or untried. This wing should be widened the same as the other two, and should be extended in length to one hundred feet, or at least to the same length as the other wings.

It should be so constructed as to afford accommodation for female convicts, on the same principle as that of the cells now in use for male convicts. The three lower ranges of cells should be taken for this purpose, and would afford accommodation for one hundred convicts. The exterior corridors should be open to this height. The two upper ranges should then be fitted up in the same manner as the wards for untried males, in separate ranges or floors, with larger cells and corridors floored over; this would afford accommodation for thirty-two untried females, divided into four classes, with separate sleeping cells.

The attic would add another large room to the prison, and the whole would be heated and ventilated on the same principle as the other wards.

I have already remarked that with a very moderate pressure of steam, the whole of the pipes employed for warming the improved wing are quickly heated, and that the steam returns uncondensed to the engine-room. I have therefore no doubt that the same boiler, or one a little larger than the present one, would suffice, with a very trifling increase of fuel, to heat the whole building, and would furnish hot water to the kitchens, altogether superseding stoves, and put an end to the danger from fire. Thus improved, the Montreal gaol would rank second to no institution of the kind in this country, and would amply suffice for this District for very many years to come. It would give separate sleeping cells to 230 convicts, and 110 untried prisoners; which, with an average of ten in hospital, would give a total of 350 prisoners. To complete the whole, the centre building should be entirely gutted out, and converted into work-rooms, which would also serve for dining-rooms; after which, perfect discipline could be properly enforced. Until this is done, the Montreal gaol will continue to be a reproach to the country, a source of constant and just complaint, and a school of

corruption where the young are sure to be contaminated and the old confirmed in their dangerous career.

The accommodation which the improved wing affords would admit of all the other improvements I have herein recommended being carried on, with scarcely any inconvenience or risk. A much larger proportion of the work than has been done by convict labour in the improved wing, could be performed in perfecting the improvements I have now recommended, so that the expense would be proportionably very much less.

But if the expense were even much greater, the necessity which urgently demands these improvements would be still the same; and surely it would be false economy to balance the public purse against public morals, and allow an evil of such magnitude to continue, when a few more pounds would complete a work so much required. What is already done is but a part, and by no means the most important part of a comprehensive system; and its value will mainly depend upon the completion of the whole.

Besides the foregoing requirements, there is still another, the necessity for which becomes more apparent every day; but as it is an exterior work, connected rather with the security than with the discipline of the gaol, I have reserved the notice of it till now. I allude to the outer gate, the necessity for improving which has been admitted by the Honorable Commissioners already. The present gate is a very crazy affair, incapable of resisting the shoulders of three or four men determined to push it in; and being a single gate, the keeper of it might easily be surprised by a concerted movement either from the prisoners in the yard, or a riotous mob from outside. A double gate is therefore absolutely required, more especially as the probability of such movements increases nearly in the same ratio as the troops are withdrawn from this garrison. I have so recently forwarded a sketch of this improvement, showing what I conceive to be required, that I



deem it quite unnecessary to do more than refer to it in this Report.

There only now remains to be noticed the necessity that exists for a general storehouse for convicts' tools, prisoners' carriages, straw-house, &c.; likewise, a work-shop for convicts. All the sheds formerly used for those purposes were pulled down as a measure of necessity, when the great fire in 1852 ravaged the city, and have not since been re-placed, owing to a bye-law of the Corporation, passed immediately after the fire, which prohibits the erection of wooden buildings within the city limits. I expected long since to have received instructions from the Hon. Board of Works to erect substantial buildings for those purposes, but up to the present time nothing has transpired in that respect. The want of such buildings occasions not only great irregularity in the changing of prisoners' beds, but heavy loss in the item of straw:

In conclusion, it is proper that I should allude to a project which has already occupied the attention of the Honorable Board of Commissioners. viz:—the enclosing of the gaol property with a stone wall, with a view of turning the same to a most profitable use, and for supplying healthy employment to a class of convicts whose sentences are so short, and their incapacity for any employment above common labor so apparent, as to render futile all attempts to teach them any other. If the grounds were properly enclosed, they could be converted into a model farm and nursery on a small scale, yielding a considerable quantity of vegetables for prison use, and consequently diminishing the expenditure of the institution. Besides, it would become a valuable means of instruction to juveniles in the important branches of agriculture.

Trusting that the foregoing report may meet the approval of the Honorable Commissioners, not only as regards the works already completed under my superintendence and control, but also as regards the other

improvements I have herein recommended, the necessity for which can be fully understood only by persons having the practical experience of years.

I have the honour to be,

Sir,

Your Obedient Servant,

THOMAS McGINN,  
Gaoler and Sup. of Works.

Thomas A. Begley, Esqr. }  
Sec. Public Works. }

## APPENDIX.

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When the foregoing Report was made, the improved wing of the gaol to which it referred had been occupied by the prisoners but a few weeks, and although they were weeks calculated to test its value in a hygienic point of view, as the cholera was then prevailing in the gaol to an alarming extent, the winter alone could fully test its merits when every avenue by which cold could penetrate was closed as tightly as possible. If the heating apparatus failed to supply sufficient warmth, a large sum of money would have been thrown away. But if it answered the expectation that had been formed respecting it, not only would the heating of the wing be secured in a manner that rendered danger from fire impossible, but that great essential to life and health—an abundant supply of pure air—must follow as a necessary consequence. It was, therefore, with no little anxiety I waited for the setting in of winter. Not because I had a professional reputation at stake, or a personal ambition to gratify; but because I felt the responsibility I had assumed in recommending a mode of heating and ventilation hitherto unknown in Canada, and, so far as I was aware, entirely new. I was anxious also lest the Honorable Commissioners of Public Works should be in any way disappointed in consenting to put to the test, a principle matured by one who could not soften their disappointment nor excuse them from censure by exhibiting diplomas and testimonials, which too often serve the purpose of licensing professional men to rise in wealth and fame in spite of all their blunders.

Three winters of unusual severity have banished all my anxiety, and more than realized my highest hopes. The equable distribution and constant flow of pure air throughout the improved wing is no longer an experiment, but a fact. And in this wing it is fully demonstrated that prisons properly constructed, however large their dimensions, irrespective of the number of apartments, or the number of stories it may contain, can have every cell or room certainly and equally heated and ventilated to any required degree, without any complication or trouble in attendance or regulation. And I feel doubly gratified that the true principle for heating and ventilating buildings destined for the abode of large numbers of persons is placed in

such a satisfactory light in time to be available for other improvements that may be determined upon in this gaol, or for other prisons that may be erected. I say in time, for it is cheering to observe that the public mind is waking up to the necessity of placing the prisons of Canada upon a better footing, both as regards their physical and moral condition; and there are good grounds to hope that our present Government will take up this matter, and by timely action prevent the further growth of an evil amongst us which, at this moment, has attained such a formidable aspect in England as almost to bid defiance to the law, while it causes a feeling of insecurity and alarm, more serious and general than would be caused by a state of war. The philanthropic labours of Howard did much to alleviate the miseries of the prisons, but the good which he commenced was not followed up, and with the exception of a few large Penitentiaries such as Millbank and Pentonville, the prisons have not generally been improved so as to prevent the prisoners confined in them from being corrupted by contact with incorrigible offenders. This evil would seem to have attained a maturity, and assumed a position under the ticket of leave system, which goes to prove that the wisdom of the British nation has yet much to learn respecting criminals and their treatment; and it speaks warningly to us as, it demonstrates the folly of spending enormous sums of money upon the construction of Penitentiaries, in the vain hope that we shall there reform the hardened offender, whose education was chiefly acquired in our comparatively neglected Prisons, where he has passed *down* from one class to another, till he had gained strength and daring to make him equal to any crime, however desperate. If the statistics of crime did really establish the fact, that even a moderate proportion of criminals trained up in our Prisons would be reformed on being sent to the Penitentiary, it would still be no less a culpable waste of the public funds, than a criminal trifling with the individual, to place him in a situation where his health and morals must both suffer, simply because we have another institution where we *hoped* to reform him when he had grown bad enough to be qualified for being received into it. As theorists and inexperienced persons may not perceive, or be willing to allow the point I am seeking to establish, viz., that hardened offenders who have grown up in crime are seldom or never reformed by the discipline of Gaols and Penitentiaries, and that inattention to this fact is now inflicting upon England a scourge that will cost vastly more *without improving the character of the criminal* than would have built twice the number of Prisons with separate apartments for each prisoner, I shall transcribe a portion of the charge delivered by the late Baron Alderson to the Grand Jury at the winter assizes



for South Lancashire. In proof of this point, human nature is the same on both sides of the Atlantic, and whatever may be alleged in favor of one institution and the discipline carried out in it, by the framers of such systems, or others interested in them my deep convictions, resulting from nearly seventeen years experience, compels me to add my humble testimony to the doctrine embodied in this extract; and the records of our Criminal Courts do strongly corroborate the statement, and would still more strongly corroborate it, if the convicted felon did not appear before the Court under a new *alias* almost every time he is brought back for trial.

I do not here assert that none who fall into crime are so far convinced of their error while under the operation of their sentence, as to turn back to the path of rectitude on leaving the place of punishment. This indeed would not be true; and it is one of the most pleasing reflections connected with the discharge of my duties as a public officer, that I am acquainted with many who have left this Gaol, notwithstanding its many defects, to become honest and industrious citizens, and do still maintain that character. But it would be equally contrary to the fact to allow that prison discipline has not had anything to do with such cases. Moral suasion, not coercion, nor rigid discipline and drill, will be found powerful to win back the heart from vice to virtue. And while I dare not set limits to the Divine power and grace to change the heart of a thief upon his death bed, duty, experience and economy, with one voice, urge us to apply the means as early as possible; and if we do not succeed, self-reproach will not be part of our punishment. Punishment is powerless to change the human heart; its natural effect is to render it more callous, and if it be inflicted under circumstances, and surrounded by influences the tendency of which are to make light of crime and to sneer at every appearance of remorse, and so corrupt the heart, what room have we to hope that ere long our discharged criminals will not make us experience in a measure the evils against which we are now admonished by England. The only effect that punishment can have in the abstract, to prevent crime, will be in proportion to the degree of terror it inspires. For the old offender, who has had experience of both Prison and Penitentiary no terror is inspired. He simply feels the inconvenience a few years of confinement may cause him. So little is the Penitentiary dreaded by those who have been confined there, that I have heard them console themselves for their "bad luck" in being sent back again to it by the pleasing thought that they were sure of a few good meals on their journey thither. With the fact and experience of years before me, I feel that I cannot better serve the interests of the public, than by urging upon every suitable occasion the importance of promptly making such

alterations in the Gaol where this sad experience has been acquired, as will render the building safe and wholesome, while the comparatively virtuous may be separated from hardened offenders, thereby preventing what we are powerless to cure.

As stated in the foregoing Report, one of the wings of the Gaol has been improved on a principle combining all the advantages required in a convict prison, and is capable of confining one hundred and sixty-five male convicts in separate cells. This, it is conceived, will be adequate to the wants of the District of Montreal for many years to come. The other wings occupied by the untried male prisoners, and by all the females—tried and untried—remain in the same unhealthy condition as they were described to be in a Report written nearly three years ago.

The early meeting of the Legislature, and the fact that the subject of prison improvement is forcing itself upon the public mind, in both sections of the Province, make me regard the present as a fitting occasion to bring the whole subject again under the consideration of Government, in the hope that the next Session of our Provincial Parliament will not be allowed to pass away without steps being taken to improve the two remaining wards of the Gaol, so that the health and morals of the untried, and consequently innocent prisoner, may receive at least as much care and attention as the guilty convict. From the experience I have had in the working of the principle carried out in the improved wing, the anxious and careful study I have bestowed upon laws which govern heat and ventilation, as well as the investigation of various and dangerous inventions in hot air stoves and furnaces, recommended by professional friends who should know better, I am enabled to speak with confidence upon this branch of architecture. I feel that I cannot too earnestly raise my voice against the use of stoves and furnaces in public buildings. What a number of churches and other valuable buildings, both public and private, have been laid in ashes by the use of some patented apparatus for supplying hot air, or, more properly speaking, *burned air*! If the records of the tomb could be as distinctly traced and understood as the firing of a building from a hot air stove, the frightful facts disclosed would, I am convinced, sweep such inventions for ever from every dwelling. In behalf of the prisoners, who can exercise no influence in such matters, but who, nevertheless, have a deep interest in them, and in behalf of the interests of society, I feel called upon to discuss the question of heating and ventilation, convinced as I am that a vast proportion of the mortality in town and country, but chiefly in the former, might be traced to bad ventilation. But as the eye cannot perceive the noxious property with which the air of a room is mingled, nor the other

senses promptly detect the subtle agent which sows the seeds of disease and death in almost every room, however spacious, where a number of persons are collected together even when some of the effects of foul air experienced. I will illustrate by the following circumstance:—

I was lately obliged to remain for several hours in a room in which about three hundred persons were present. The room is a spacious one containing probably from fifty to sixty thousand cubic feet of atmospheric air, and is heated with warm air by means of steam pipes, which could not possibly destroy any of its components; there were two ventilators in the room designed to draw off the foul air, but as they were placed in an outside stone wall, the external face of which was exposed to a temperature many degrees below zero, it must be obvious to any one acquainted with such matters, that flues so situated could not relieve the room. Indeed, the most illiterate housewife knows by experience that a cold flue will not draw. The frequent opening of two doors doubtless prevented the air of the room from becoming as foul as it otherwise would, but notwithstanding this help, as the afternoon wore on, the room became oppressive, and several complained of the suffocating heat; the perspiration literally flowed from every pore, and I felt a sense of fulness and throbbing in the head and temples, and a difficulty of breathing; while at the same time my hands and feet felt uncomfortably cold. Satisfied that these sensations owed their existence to the presence of some more dangerous agent than heat, I procured a thermometer, and found that the temperature of the room was only 70° of Fahrenheit, a degree of heat just enough for comfort, and by no means sufficient to cause any unpleasant feeling. But loaded as it was with carbonic acid gas (a deadly poison exhaled from three hundred pair of lungs for several hours in succession), the effect was not merely to render the room oppressive for the time being, but also to attack the health of all exposed to it. The effect upon myself was a violent catarrh, followed by a severe ozaena, from which I am still suffering.

Now a few words will explain this state of things. Each pair of lungs will inhale one cubic foot of air every two minutes and one third, or about twenty-five cubic feet per hour; hence in eight hours 300 persons would have inhaled and exhaled 60,400 cubic feet of air, or rather more than the contents of the whole room. But in order to estimate correctly the actual extent of this process of deterioration, it is necessary to observe that the lungs were not the only agents at work; the exhalations from every part of the body constantly going on, however insensibly, carrying off the refuse carbon from the system, fearfully augmented the work of deterioration. The intense quantity of carbon



thrown from the human body, Liebig shows to be equal to ten ounces in twenty-four hours; hence 300 persons in eight hours would have thrown off 375 ounces, or  $31\frac{1}{4}$  lbs troy—equal to 781 cubic feet of this deadly poison (carbonic acid) which would be held in solution in the air of such a room. This gas, fifteen per cent of which will cause death, is one and a half times heavier than common atmospheric air, and cannot ascend out of a room, unless it be raised to a temperature of nearly  $300^{\circ}$ , consequently, it sinks toward the floor. Thus it is that the lower extremities being immersed in this gas in its greater degree of concentration, suffer from cold, while the other parts of the body feel hot and feverish. The Grotto del Cane, in Italy, will illustrate this point: dogs and other small animals are instantly deprived of animation when brought into it, while men whose heads are above the poisoned strata escape with comparative impunity.

The experiments made in the House of Commons, the proper ventilation of which was attended with such difficulty and expense, establish the fact that less than ten cubic feet of pure air per minute, for each person, must prove hurtful to health. Taking such conclusions as the foregoing for our standard, we find that foul air, and not positive heat, caused all the inconvenience in the room just noticed. The 300 persons would require a constant supply of one hundred and eighty thousand cubic feet of pure air every hour; but as the room could not contain more than one-third of this quantity, the same air, loaded with the excrementitious matter from our own bodies, had to be inhaled over again. As already observed, the frequent opening of the door prevented the more fatal consequences that would otherwise have been inevitable.

Now if such results may be produced in consequence of a diminished supply of pure air, how necessary is it that the wards of a Gaol, and especially the wards of untried prisoners who are kept night and day, for several weeks or months, should have an abundant supply of that grand essential. How criminal would we become with such evidence before us, if we fail to remedy defects of this kind where they now exist, and particularly so if, in every improvement hereafter to be made, we fail to make thorough ventilation a first consideration. That the conclusions drawn from the foregoing facts and figures are sustained by the highest authorities, the following extracts will satisfactorily prove:—

M. Beaudelocque, in his observations upon scrofulous diseases, asserts that “if there be entirely pure air, there may be bad food, bad clothing and want of personal cleanliness, but that scrofulous disease cannot exist.”

Sir James Clark says, “if an infant born in perfect health and

of the healthiest parents be kept in a close room, in which free ventilation and cleanliness are neglected, a few months will suffice to induce tuberculous cachexia. Children reared in the workhouses of this country, and in similar establishments abroad, almost all become scrofulous; and this more we believe from the confined and impure atmosphere in which they live, and the want of active exercise than from defective nourishment."

Extracts from the very highest authorities might be multiplied, proving the correctness of the foregoing conclusions, and a volume might be filled with facts set forth by statistics of the principal prisons in England and the United States, all to the same purport; but assuming that the principle will be admitted by every one who can have any influence in the construction of our public buildings, I shall take up its kindred subject, heating:—

On this subject it is not wonderful that there should be considerable diversity of opinion; for independent of the ignorance that remains respecting the laws by which heat is regulated, and the prejudice and self-interest which too often determine the side which men will take on questions, the various inventions and the numberless patent rights for hot-air stoves and heating furnaces, which have been puffed into existence, are sufficient to bewilder the mind. Each new patentee claims for his invention some peculiar and unrivalled excellence, gaining the ascendancy by dint of puffing, till its defects become apparent by the expense attending it; or, by the great number of houses fired by it. But the argument which touches the pocket generally succeeds; however large the annual loss in the shape of property consumed by means of the hot air stove or furnace, and it must be enormous, I feel great confidence in making the assertion that it does not deserve mention in comparison with their pernicious influence upon life and health. The rapidity with which the human body deteriorates the atmosphere of a room, as we have seen, is very great; nor will the best system of ventilation which we can employ warrant us in adding such a dangerous and powerful auxiliary as the hot air stove, to render the work of destruction doubly certain.

The component parts of atmospheric air are so exactly the same in every part of the earth, from the tropics to the poles, and man is sure to suffer from inhaling it whenever these proportions are interfered with, that a little reflection should convince any one, that the All-wise Creator never intended it to be roasted in a stove before we inhale it. I assume fearlessly that the time has fully come, when every one claiming to deal with the life of his fellow man as an architect or otherwise, incurs a fearful responsibility if he does not set his face against the hot air stove or furnace, as against a most insidious and deadly enemy.

In heating a building with one of those many patented inventions, one of two causes must be constantly at work destroying the quality of the air. Either the air becomes scorched in its passage through, or over tubes or plates heated to a state of incandescence, or, to avoid this danger, by keeping a slow fire and a low temperature, the carbonic acid gas generated within the stove will not be raised to the necessary degree of temperature—say 300 deg. f., to cause it to ascend, and must therefore be thrown back into the room.

I shall briefly notice both these schemes ; and first I shall consider the effect of a stove highly heated, taking one of the wards of this gaol with Nott's highly praised stove to illustrate the effect produced during a winter's night. The ward contains about 20,000 cubic feet of air. In cold weather, very little fresh air will be admitted through the day time, but at night there will be none—every door and window by which fresh air could enter being closed for more than twelve consecutive hours, during which time twenty prisoners confined in it would require, according to the former standard, 144,000 cubic feet of pure air, or nearly seven times the quantity contained in the ward. To this we must add the effect of the stove, the peculiar *merit* of which consists in having several tubes passing perpendicularly through both the top and bottom of the stove-plates. The fuel is placed between the tubes, which, even with a moderate fire, will quickly become red hot, and as an inevitable result, the air of the room must ascend through them with a velocity proportioned to their temperature. I will suppose such a stove to contain two rows of such tubes two inches in diameter—five in each side, or ten in all. The velocity of the air through these tubes would be at least twenty feet per second, which would exceed the entire quantity of air contained in the room in one hour ; hence the same air must pass twelve times through tubes highly heated during the night, and rendered seven fold foul by the prisoners. Is it not then perfectly manifest that a supply of pure air corresponding to the quantity destroyed must be provided, if we do not mean to enact the fearful tragedy on board the Steamer "Londonerry" over again. The chinks and openings of doors and windows could not supply the demand : provision therefore must be made to take the supply from the outside by means properly adapted to that purpose, otherwise death might be the result of a single night's abode in such a ward.

That this is no fanciful calculation, every one moderately acquainted with physical science will perceive at a glance ; and to satisfy those who are not, I may state that in 1843, after the lunatics were removed from this Gaol to Quebec, such a stove was left in one of the wards that had been occupied by them. A care-



ful inspection satisfied me of the danger of using it. Before condemning it, however, I resolved to test it. For that purpose I closed the windows and door of the empty ward tightly on going to bed, and put a strong fire in the stove. On going into the ward next morning, I found the air had a peculiar burnt odor, respiration being exceedingly difficult, and I was seized with stitching pains in the chest, a sense of fulness in the head, and throbbing in the temples. I firmly believe I could not have lived one hour in that state. Next night the experiment was repeated for the satisfaction of the late Dr. Arnoldi, then Physician to the gaol. So thoroughly satisfied was the Doctor of the danger of using such a stove, that it was promptly condemned. I shall dismiss the consideration of this stove by a short extract from that high authority, Dr. Ure. "Stoves," he says, "when properly constructed, may be employed both safely and advantageously *to heat entrance halls upon the ground story of a house*, but care should be taken not to vitiate the air by passing it over ignited surfaces, as is the case with most of the patent stoves now foisted upon the public."

The Custom House in London, which was heated by air forced into the different apartments after being raised to the required temperature by a stove, was examined by Dr. Ure in 1836, at the request of the "Directors of the Custom Fund Life Assurance Company," on account of the very general state of indisposition and disease prevailing among the officers of that institution, more than one hundred in number. As already remarked, the argument that touches the pocket is generally conclusive. The keen eyed Directors are moved in this matter by mere avarice. Had there been no insurance upon the lives of the officers of the Custom House, they might either resign their situations or die without an effort being made to render the scene of their daily toils wholesome. Let the nobler feelings of humanity, as well as a sense of duty, prompt us to do for the wretched prisoners what self-interest accomplished for the Clerk's House. The expense is not greater to do the thing as it should be. The Dr. remarks, after describing the symptoms complained of by the sufferers—"The sameness of the above ailments in upwards of one hundred gentlemen at various periods of life, and of various temperaments, indicates clearly sameness in the cause." What that cause was, the Dr. did not leave to be inferred. He says "The fœtid burned odour of the stove air, and its excessive avidity for moisture, are of themselves sufficient causes of the general indisposition produced among the gentlemen who are permanently exposed to it in the discharge of their public duties." I deem it needless to multiply evidence which I might easily do from the very highest authorities, to prove the same fact, because the experience of every one doomed to live in



apartments heated in this way, knows it is true. I do especially request attention to the concluding paragraph.

He says, "in conclusion, I take leave to state to you my firm conviction, that *the only method* of warming your long room, and subsidiary apartments, *combining salubrity, safety and economy, with convenience in erection and durable comfort in use, is by a series of steam-pipes laid along the floor, at the line of the desk partitions, in suitable lengths, &c.*"

Turning now to examine the evils resulting from the use of stoves when a low degree of heat is employed, the same authority (Dr. Ure) supplies the following evidence:—He says, "I have recently performed some careful experiments upon this subject, and find that when the fuel is burning so slowly in the stove as not to heat the iron surface above the 250th or 300th degree of fahrenheit—there is a constant deflux of carbonic acid gas from the ash-pit into the room." "There is no mode in which the health and life of a person can be placed in more insidious jeopardy than by sitting in a room with its chimney closed up and such a choke-damp vomiting stove."

Such testimony places the question of hot air stoves beyond controversy, and points "*to the only*" sure and *safe* mode of heating, &c. But if it were possible to invalidate such testimony, or rather, I might say, to reverse nature's laws, and that stoves would cease to scorch the air passing over their heated surfaces: or, avoiding this evil by slow combustion and a low temperature, would not allow the carbonic acid gas generated within them to fall back into the room—still after escaping the dangers both of "charybdis and scylle" there remains another difficulty for which the stove system does not pretend to offer any remedy, viz: the expulsion of foul air from the apartments, which must accumulate in proportion to the number of persons occupying it. Every scheme that does not combine the expulsion of vitiated air, with a full supply of pure warm air, should be rejected, whatever its pretensions may be. But the patrons of the stove, conscious of this radical defect in their scheme, are driven haphazard to propose various remedies, many of which scarcely deserve to be regarded in any better light than a guess. "Make an opening in the ceiling," says one, "carry up flues," says another, "open your windows," says a third, "make wooden flues from the lower story to the roof, with openings at each flat," says a fourth. Now, whatever may be the general merits of any such expedients, they are all open to insurmountable objections as regards the proposed improvements in the gaol, where the class of prisoners in one ward are to be prevented from communicating with those confined in another. An opening in the ceiling would enable those above and below to hold intercourse; and besides, in case of fire below, such openings would serve to

give it ready access to the wards above. Flues will not carry off the poisonous gas when once it becomes disengaged, except their temperature be raised to  $300^{\circ}$ . Windows cannot be kept open when the thermometer ranges far below zero. But the wooden flues, notwithstanding the seeming advantages they possess over flues carried up in cold walls, are by far the most objectionable of all. I will suppose a series of wooden flues running up from the basement to the attic, (I need not say their temperature cannot be increased by artificial means.) Is it not quite evident that prisoners in the attic could converse with those in the basement through such flues? Would not a fire occurring on any flat involve the whole building in a few moments, the wooden flues not only serving as conductors, but supplying the fuel at the same time? Would not a match applied to one of these flues after they had become thoroughly dry, ignite, carrying the flame through the flue to every flat in a few minutes?

To these weighty and conclusive objections against the employment of stoves for heating buildings, there are others deserving of serious consideration, which have especial reference to their unsuitableness for a prison, which I shall notice in a few words. The acknowledged danger of a stove setting fire to a building is greatly enhanced when desperadoes, confined in prison, and desirous of effecting their escape in the confusion which an alarm of fire would occasion, have access to them. This Gaol has been already set on fire by a prisoner of this stamp, who was tried and convicted for the offence. The danger is even greater when a stove is placed in a ward occupied by an insane person. The use of stoves interfere with proper discipline, by bringing tried and untried prisoners in contact. Also with the cleanliness of the prison, inasmuch as fuel must be carried to the stoves; and prisoners, however carefully watched, will occasionally find means to transmit messages from one to another. The expense of heating several wards by this mode, each of which must have a separate stove, would be found much greater than by a proper application of steam for that purpose, especially in this gaol, where a steam apparatus is already in successful operation, and only requires to be extended into the other wings as improvements may be carried out in them. The boiler now in use would heat the whole building in "the only" *safe, salubrious, comfortable and economic manner*. It would evince something still more culpable than prodigality to fall back again to the dangerous stove or furnace system. It will be seen that the method which Dr. Ure expresses his "firm conviction," is "the only one combining salubrity, safety and economy, with convenience in erection, and durable comfort in use," is the identical method which, after much anxiety and reflection, and in entire ignorance of

his statements, I recommended to the Honourable Commissioners for Public Works, and which is now in operation in the improved wing of the Gaol.

But before going on to describe its operation and results, I shall first cite one other authority whose competency will scarcely be called in question, viz., Richard Brown, Esq., Professor of Architecture, author of "Domestic Architecture," and several other works of note. The quotation is from an article on "the heating of Churches," in his "SACRED ARCHITECTURE," page 297, published in 1836. Mr. Brown deals some hard blows against the "stove doctors," and strongly condemns "hot air pipes and stoves," showing their dangerous effects upon the human system; and after making several extracts from Monsieur Junot and others in support of his views, goes on to say: "To raise the temperature of a winter atmosphere to that of a genial spring or summer day, in churches or other public buildings, is certainly as necessary to the preservation of health as it is indispensable to the comfort of individuals. To accomplish this, so as to produce equality of temperature in the length and breadth of an edifice, I know of no method so desirable as the circulation of hot water."

What an amount of anxiety and laborious experiments, (the clumsiness of some of which would make Dr. Ure laugh,) would it have saved me, if I had been acquainted with such authors in 1852, when I was urging upon the Commissioners of Public Works my objections to hot hair stoves, and entreating that steam or hot water heating might be tried in the wing then undergoing improvement. Nor was I the only one who felt anxiety with regard to heating and ventilating the Gaol. I well remember the earnestness with which the Honourable John Young, then Chief Commissioner, questioned me respecting the details, and the responsibility he felt in adopting the plans of one who had no professional reputation, and who could produce no diplomas for architectural or scientific attainments. My case was not a novel one. Self taught men have invariably been compelled to force the truth against public prejudice; while the most fatal blunders on the part of a man professionally educated are borne without a murmur, and seem to raise him higher in public estimation. But if I had no professional reputation to lose, I was quite indifferent to the fame to which success might entitle me. I sought truth for its own sake, and I felt desirous that the institution of which I have the charge should have the full benefit of it. Nearly three winters (of which the last and present stand almost unparalelled for severity) have fully tested the capacity and value of the heating apparatus, which is *adapted for either steam or hot water*; and the results have been in the highest degree satisfactory. Not the slightest trace of



foul air can be detected in this wing. With a constant flow of pure air into, and constant ejection of foul air out of every cell, want of proper attention alone can cause any effluvia to remain. Even in the water-closets no offensive smell whatsoever is found. In summer the windows are regularly thrown open; but however strong the currents of air outside, the window gratings break its violence and allow it to enter as through a sieve. Besides this ventilation by the windows, each cell has its own separate ventilation going on through the foul air ducts—the ejectors outside acting upon these ducts as a kind of suction pump whenever there is any motion in the air. It is only by one of two causes that foul air can be uniformly expelled from a room, viz: by raising its temperature so as to diminish its specific gravity, when it will ascend according to the law of equilibrium; or, by causing a sufficient draught in a flue opening into the room. The ejectors act in the latter way. But it is in winter that the value of this improvement can be fully appreciated. Every door and window being then tightly shut, and every chink and joint closely stuffed, ventilation is as perfect as if every window was standing wide open. On one occasion, about two weeks ago, when the thermometer was  $26^{\circ}$  below zero, and had been  $15^{\circ}$  below for several days, six or seven inches of steam kept the air in this ward as warm and soft as if it had been a day in spring. The thermometer indicated  $60^{\circ}$  in the corridors and unoccupied cells, where the registers were not open, and  $70^{\circ}$  in the cells where the registers were open. The difference of temperature from top to bottom (the corridors being open to the top, a height of forty-five feet) was only about two degrees. The quantity of wood consumed to obtain this result was never more than one cord in twenty-four hours, and this heated the ward perfectly, besides supplying an inch pipe to the wash kitchen, by which four large boilers are kept full for the purposes of cooking and washing. In milder weather, half a cord of wood is ample for this purpose. I have no hesitation in saying that if the improvements, adapting the other two wings to this mode of heating and ventilation were carried out, the boiler now used would heat every part of the gaol in the most agreeable and healthy manner, and the consumption of fuel would not exceed one cord and a half of wood per diem in the coldest weather, and proportionably less in mild weather; whereas, with the present mixed system of sixteen stoves in the unimproved parts of the gaol, nearly three times that quantity is consumed with very little benefit and much positive injury to the prisoners who flock round them. Tracings of plans, setting forth this improvement, have been forwarded to the office of the Board of Works more than two years ago, which, I have reason to believe, were approved of by the Honorable Commis-



sioners of that Department, as I received a telegraphic message from the office a short time after, directing me to prepare estimates for the whole work without delay; I did so accordingly. I may state, in conclusion, upon this point, that none of the works executed under my direction have required a penny's worth of alteration or addition; nor has the working of the heating apparatus cost the country one farthing up to this time.

Justice to myself compels me to add, that I have not received the slightest remuneration for my services either for planning, superintending, or even for working with my own hands at the improvement. This, however, will not prevent me from rendering whatever service I can to the Government, either in the way of recommending or executing, so long as I continue to hold a public office. And I do not know of any subject that can occupy the attention of Government, or in which the whole community are more deeply interested, than that of making such improvements in our Gaols, especially the large ones, as will not only wipe away the reproach, but secure the comparatively innocent who may enter it from further and worse contamination; and cause the hardened and depraved to learn under its discipline that honest industry is much better and easier than crime; doing both without needlessly impairing the health of such as may be confined there. I therefore discharge in part what I conceive to be my duty, by bringing forward this subject in this manner.

I feel that this Report and Appendix would be incomplete were I to close it without touching upon another subject, which is so intimately connected with the health and morals of our large prisons, as to render its notice proper in this place. I allude particularly to the laws now in force respecting vagrants; or to use the words of the law—"loose, idle and disorderly persons." This comprehensive term is made to include not only drunkards, prostitutes, and suspicious characters, who can give no account of themselves; but also the aged and infirm, the lame, the blind, and the sick, who cannot get into any of our hospitals, or are discharged from them convalescent or incurable; pregnant women, insane persons, and juveniles who are homeless and destitute. This motley collection all find a shelter, a home, or a place of confinement, in this prison. This vagrant law is often humanely stretched by the Police Magistrate, to save from misery, if not from death, persons who are guilty of no crime, but are merely destitute. Many are committed at their own request. The period for which they are committed under this law, varies from one day to two months. Such a law as this is of itself sufficient to baffle every attempt at proper classification and discipline, even if the mal-construction of the prison did not prevent it. Many who come in here

sentenced to "hard labour" require medical care, nourishment, nursing, and have got themselves committed solely to obtain these. Until more suitable institutions are provided for such persons, it is difficult to see how this state of things can be avoided; a large discretion must evidently be given to the Magistrate in dealing with them. But there is another, and a very numerous class, who come under the operation of this law, and adroitly turn it to their own advantage in carrying on their vile licentious practices. To deal effectually with this class of persons, the law must be greatly changed. I mean with respect to prostitutes, and loafers who frequent houses of ill-fame. Generally speaking, the commitment of such persons under the present system, so far from being a punishment, is an advantage to them; and so far from their being corrected or restrained by it, they return to liberty better qualified, and more determined to pursue their wretched calling than before; while the expense incurred by their frequent arrests, and the cost of keeping them in gaol, is more than double that of any other class of criminals. All this arises mainly from the shortness of the sentence. With every other class of transgressors, a repetition of the offence is regarded as an aggravation of the crime, and is punished accordingly; but with this class a twentieth offence may be punished with a sentence of a few days, though many of their former sentences may have been for the full period of two months. The evil of the mode of treating this class of prisoners is to destroy in their mind the idea of a just proportion between the crime and its punishment; consequently, if the sentence be either longer or shorter than they desired, they will ascribe it to some cause or other having no connection with the offence. The utmost limit to which the power of the Magistrate extends, viz: two months, is far too short, to wean these unfortunates from their desire for strong drink and vile companions, or to teach them any good, morally or physically, by which they might be led to reflect upon the evil of their ways and acquire habits of industry, to earn an honest livelihood. Again (and this is a very important fact in many respects) the sentence is far too short to *cure* these unfortunates of a disease peculiar to their class, with which a very large proportion of them are constantly afflicted. Many of them are not thoroughly cured from year to year. Let us take a glance at the practical operation of the short sentence system upon this class. For a few days after they are committed to gaol, they are generally suffering from the effects of drunkenness, and other excesses. Delirium tremens is very common at this stage. When they come to their reason, and to a right use of their feelings, they throw themselves on the Doctor's hands, to be treated for their standing ailment. They are sentenced to "hard labor," it is true; but this is out of the question with creatures broken

down by excess, and suffering under an exhausting disease. They require not only medical care, but nourishment suited to their case, and thus they spend the period of their short sentence, to return again to the streets, provided their health will at all allow it. The cure of such a disease in such a short time is of course out of the question; consequently they go out half cured, with the system fully under the influence of medicine. In this dangerous condition for themselves and others, they remain at large for a few days, or it may be weeks, plying their miserable calling,—contracting disease anew, sleeping in the open air, and saturating the system with cheap whiskey, or more properly speaking, compound poison. When exhausted nature fails and yields to the unequal conflict, and reason staggers under the combined pressure of poisoned alcohol, complicated disease and want of rest, the wretched prostitute totters into some friendly gateway or deserted shed, and falls unconscious over her broken bottle or filthy crust. Here the struggle would soon be ended if the watchful policeman did not speedily come to the rescue. She is sent back to gaol perhaps to have her frozen limbs amputated, and after two more months, is set at liberty to go through the same round again. This goes on for years without much change, save that the mind is more depraved and the body sinks under a disease that might have been cured had there been sufficient time afforded. At length it lays hold upon the whole system, or induces some other disease that brings on death. There is a woman in gaol at this moment who has been going this round for twenty years, during which period she has never been sentenced for more than two months, and has seldom been absent from the gaol more than one. It will be seen that for this class the gaol is a kind of irregular hospital, prolonging a miserable life without permanently benefiting the party, or without serving any useful purpose to society; but entailing a heavy expenditure upon the revenues of the Province without any equivalent whatever. The extent to which this state of things prevails may be conjectured from the fact that during the first six weeks of the current year, with a daily average of say two hundred and twenty prisoners of all grades, the Doctor has made 532 prescriptions, and has ordered 448 entries for additional nourishment under the head of “medical comforts” for the sick, including the lunatics and children. When the accounts for this service come before the public, the largeness of the sum may excite some remark or censure in a quarter where there is no power whatever to change one item of it. Now it is respectfully submitted, that a great check, if not a remedy for much of this, would be found in changing the law on this point, giving power to the Committing Magistrate to extend the period of imprisonment on every repetition of the offence, and in no



case to allow a diseased person to be released from confinement. This would diminish the labor of the Doctor by one half—would prevent infection from spreading—would restore the party to health, and consequently would greatly diminish the sick list and the heavy bills growing out of it. It would allow the party time for reflection and for the acquisition of industrial habits. A better and more profitable description of labor might then be introduced into the work-room. A two months' sentence is but sport; six or eight would be punishment. The law would then have some terror for the evil-doer, and a large saving would be effected in the treatment of this expensive class of prisoners. In a word, both the prisoner and the country would gain by the change.

I shall conclude by expressing my earnest hope that the Government may take up this important subject in the spirit of wisdom and justice, and that the Legislature will meet them in the spirit of fairness and true philanthropy; resulting in the immediate improvement of our prisons, morally and physically, so that neither mind nor body shall be exposed as at present they are to unwholesome influences. I trust a law will be enacted which will not minister to crime, if it does not reform or wholly prevent it.

THOMAS McGINN,  
*Gaoler.*

Montreal Gaol, 16th February, 1857.







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